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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,083	11/19/2003	Kong Kyeom Kim	MUTUI2.001DVI	9416
20995	7590	12/13/2004	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			THOMPSON, CAMIE S	
			ART UNIT	PAPER NUMBER
			1774	
DATE MAILED: 12/13/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/718,083

Applicant(s)

KIM ET AL.

Examiner

Camie Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 17-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/099,781.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-19-03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election of group I, claims 1-16, drawn to an organic electroluminescent device and display is acknowledged.
2. Examiner acknowledges applicant's election of chemical compound 109 for claim 7, chemical compound 200 for claim 13 and chemical compound 301 for claim 15.
3. Applicant argues the restriction requirement. Applicant argues that Groups II and III depend on Group I and should be prosecuted together. The method of generating visible light from an organic EL device can be done by applying an alternating current to the anode and cathode and using a different compound in the hole transporting layer. Thus, the method of generating visible light from an organic EL device would require an additional search in a different class. A double spiro compound is not necessary to generate visible light from an organic EL device. The manner in which an organic EL device is manufactured can vary and would require a search in a different class.

The restriction is still deemed proper and therefore is made **FINAL**.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed

150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rendered indefinite because it is unclear as to whether or not the light-emitting layer comprises a double-spiro compound or a double-spiro compound and an additional material.

Claim 12 is rendered indefinite because it is unclear as to whether or not "the at least one layer" is a light emitting layer or an electron injecting or transporting layer. Claim 12 is dependent upon claim 1, which recites "the at least one layer comprises a light emitting layer".

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Claim 14 is rendered indefinite because it is unclear as to whether or not “the at least one layer” is a light emitting layer or a hole injecting or transporting layer. Claim 14 is dependent upon claim 1, which recites “the at least one layer comprises a light emitting layer”.

Claim Rejections - 35 USC § 102

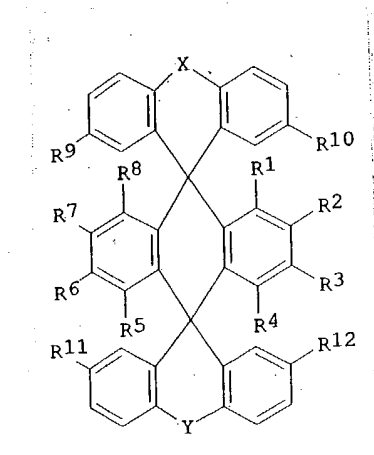
7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims 1-3, 5-6 and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by CN 1338499. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

The Chinese reference discloses an organic electroluminescent device comprising a pair of electrodes sandwiching layer(s) containing bispirocylco ring derivatives having the following chemical structure



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wherein X and Y can be a chemical bond and R1-R12 can be hydrogen, (iso) alkyl, hydroxyl, alkoxy, NO, CN, amino, S, halo, aromatic or (un)substituted heterocyclyl as per instant claims 1-3, 5-6 and 16 (see page 13). The abstract of the Chinese reference discloses that the bispirocyclo derivatives are used as electroluminescent material or as a luminous additive and have carrier transmission capabilities as per instant claim 6. The band gap (1.8 eV to about 3.5 eV) for the bispirocyclo derivatives is a physical property of the compound (s), and thus inherent.

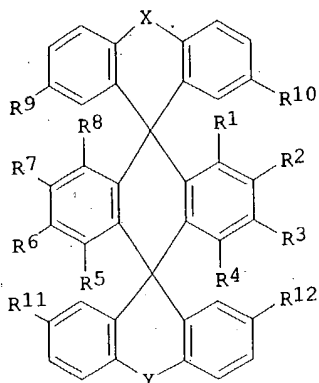
Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over CN 1338499 in view of Salbeck et al., U.S. Patent Number 6,211,369.

The Chinese reference discloses an organic electroluminescent device comprising a pair of electrodes sandwiching layer(s) containing bispirocyclo ring derivatives having the following chemical structure



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wherein X and Y can be a chemical bond and R1-R12 can be hydrogen, (iso) alkyl, hydroxyl, alkoxy, NO, CN, amino, S, halo, aromatic or (un)substituted heterocyclyl as per instant claim 1 (see pages 13-20). The reference does not specifically disclose electron injection; electron transporting, hole injection or hole transporting layers as per instant claims 12 and 14. The reference does disclose an electroluminescent device that can have more than one layer for which the bispirocyclo derivatives can be used (see page 13). Salbeck teaches spiro compounds that can be used as electroluminescence materials in an electroluminescence device (see column 42, lines 15-25). Additionally, the Salbeck reference discloses spiro compounds that can be used for a light-emitting layer and/or a transport layer and/or a charge injection layer (see column 42, lines 31-36). The electron and hole injection layers have carrier recombination occurring away from the electrodes, which increases the efficiency of the device. Therefore, it would have been obvious to one of ordinary skill in the art to have electron injection and hole injection layers in the electroluminescence device in order to have an electroluminescent device that has high brightness and increased efficiency.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-6, 8-12, 14 and 16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 30, 36-37, 59, 62-64, 66-67, 74 and 79-84 of copending Application No. 10/431,349. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications recite an organic electroluminescent device comprising an anode, a cathode and at least one layer located between the anode and the cathode. Additionally, both applications recite a light emitting layer, hole injecting or hole transporting layers and electron injecting or electron transporting layers. Also, both applications recite a light-emitting layer comprising a double spiro compound and a fluorescent or phosphorescent compound. The co-pending application does not specifically recite a double-spiro compound wherein R1 through R24 are substituent groups, identical or different, and wherein not all of R1 through R24 are hydrogen, which is generic. However, the co-pending application does disclose compounds 21-24 that are double spiro compounds wherein not all of R1 through R24 are hydrogen. Therefore, it would have

been obvious to one of ordinary skill in the art to use double spiro compounds 21-24 as they are species within the generic group of double spiro compounds.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

13. Claims 7, 13 and 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art does not provide for the recited electroluminescent device comprising a double-spiro compound selected from the chemical compounds 100-127, 130, 132, 135-137, 200-222 and 400-413.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L Dye, can be reached at (571) 272-3186. The fax phone number for the Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dawn Garrett
DAWN GARRETT
PRIMARY PATENT EXAMINER
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